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BY: July 1, 2003

DATE: March 10, 2003

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

MAR 17 2003

In re: Patent Application of : Group Art Unit: 1652  
Emil C. Gotschlich :  
: **TECH CENTER 1600/2900**  
:   
Appln. No.: 10/007,267 : Examiner: Manjunath Rao  
:   
Filed: December 3, 2001 :   
: Attorney Docket  
For: GLYCOSYLTRANSFERASES FOR : No. **040853-01-5029-02**  
BIOSYNTHESIS OF :   
OLIGOSACCHARIDES AND GENES :   
ENCODING THEM :

**AMENDMENT**

This Amendment responds to the Office Action dated December 9, 2002 (Paper No. 6), sent in connection with the above-identified application. This Amendment is being timely filed in view of the shortened statutory period for reply, which sets the time for a response to the Office Action to and through March 10, 2003 (March 9, 2003 being a Sunday).

In response to the Office Action, kindly amend the application as follows:

**In the Specification:**

Please delete the paragraph from page 4 line 15 to page 5 line 2, and insert the following paragraph in place thereof:

-- Little information on the genetics of LOS synthesis in Neisseria is available. A major advance has been the creation (Dudas and Apicella, 1988, Infect. Immun. 56:499) and biochemical characterization (John et al., 1991, J. Biol. Chem. 266:19303) of five pyocin mutants of gonococcal strain 1291, dubbed 1291a-e. Immunological and biochemical data have shown that 1291a, 1291c, 1291d and 1291e produce LOS with sequential shortening of the lacto-N-neotetraose chain, with mutant 1291e lacking the glucose substitution on the heptose. Mutant 1291b synthesizes the